

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5  
9311 GROH ROAD  
GROSSE ILE, MI 48138

EPA Region 5 Records Ctr.



374604

DEC 16 2010

**MEMORANDUM**

SUBJECT: ACTION MEMORANDUM - Request for Approval of a Time-Critical Removal Action at the Patterson Chemicals Inc. Site, Detroit, Wayne County, Michigan (Site ID # B5XJ)

FROM: Partap C. Lall, OSC  
Response Section 2, ERB1

THRU: Jason El-Zein, Chief  
Emergency Response Branch 1

TO: Richard C. Karl, Director  
Superfund Division

**I. PURPOSE**

The purpose of this memorandum is to request and document your approval to expend up to \$282,000 to abate an imminent and substantial threat to public health, welfare, and the environment posed by the Patterson Chemicals Inc. Site (Site) located at 11930 Pleasant St., Detroit, Wayne County, Michigan. This response action is being undertaken to mitigate the imminent threat to public health, welfare, and the environment posed by the release of hazardous materials in drums, 5 gallon pails, 33 above-ground storage tanks (ASTs), two laboratories and other miscellaneous waste materials scattered around in and outside of three buildings on the property. There is also a leaking sulfur well in building 2 on the property which has been temporarily plugged but needs to be permanently secured.

The response actions proposed herein will mitigate Site conditions by properly removing and disposing of all hazardous substances and associated contaminated media. These response actions will be conducted in accordance with Section 104(a) (1) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 USC § 9604(a)(1), to abate or eliminate the immediate threat posed to public health and/or the environment by the release or threat of release of hazardous substances. Because of the location of the Site and presence of uncontrolled flammables and corrosive materials, this Site must be classified a time-critical removal. The project will require an estimated 30 on-site working days to complete.

The Patterson Chemicals Inc. Site is not on the National Priorities List (NPL).

**II. SITE CONDITIONS AND BACKGROUND**

CERCLIS ID# MIN000510462

## **A. Physical Location and Site Characteristics**

The Site (latitude 42.280829°North and longitude 83.142623°West) is located at 11930 Pleasant Street in Detroit, Wayne County, Michigan 48217. It is located in a mixed residential/industrial area. The Site consists of three main buildings, 25 exterior ASTs, and eight interior ASTs. The Site is bordered on the south by Pleasant Street and residential properties, and on the west, north, and east by industrial sites. Site access is unrestricted, even though the Site is completely fenced. Evidence of unauthorized access (i.e., trash dumping and vandalism) was observed. Vulnerable county drains and residential areas border the Site to the west and south.

## **B. R5 Superfund EJ Analysis for Pickens Plating**

The area surrounding the Patterson Chemical Site was screened for Environmental Justice (EJ) concerns using Region 5's EJ Assist Tool (which applies the interim version of the national EJ Strategic Enforcement Assessment Tool (EJSEAT)). Census tracts with a score of 1, 2, or 3 are considered to be high-priority potential EJ areas of concern according to EPA Region 5. The Patterson Chemical Site is in a census tract with a score of 1 (Figure 1). Therefore, Region 5 considers this Site to be a high-priority potential EJ area of concern. Please refer to the attached analysis for additional information (Attachment 4).

## **C. Site History**

The Site is the former location of Patterson Laboratories, Inc., a chemical formulation company, and subsequently West Win, Ltd. Both companies used the Site buildings for formulating commercial chemicals. The Detroit Fire Department (DFD) stated that the Site buildings have not been used for approximately 2 years.

On March 26, 2010, the National Response Center received a report from an anonymous caller who stated that liquid was leaking from one of the Site buildings, and that a "rotten egg" odor was present in the vicinity of the Site building where liquid was leaking out. The City of Detroit Water and Sewerage Department (DWSD) was called and subsequently went to the building. After determining that the source of the leaking liquid was a standing pipe inside the building, DWSD was able to plug the pipe in order to substantially stop the leak. In addition to plugging the pipe, the WSD also encountered hydrogen sulfide (H<sub>2</sub>S) readings of 1 to 2 parts per million (ppm) outside of the building.

The DFD subsequently requested assistance from U.S. EPA to properly assess the hazards related to the unsecured buildings and containers of chemicals at the Site.

## **D. Site Assessment**

During the site assessment, the following observations were made. Building 1 is a small outbuilding located near the southeast portion of the Site. This building contains 27 drums and containers, ranging in size from 5 to 55 gallons, and at least 40 small containers, ranging in size from 20 ounces to 1 gallon. A number of the drums are open or have open

bung holes. Evidence of leaking drums and containers is present given that floor staining was observed and areas of the building floor contain puddles of unknown liquid. Debris and general refuse are strewn throughout the building. In addition, Building 1 contains a small laboratory room that contains numerous laboratory chemicals.

Building 2 is the large main building at the Site. This building contains the following uncontrolled, unlabeled, and unidentified materials: 30 drums, ranging in size from 5 to 55 gallons; eight ASTs; totes; small containers; one standing pipe that was plugged by DWSD; and one area of standing water that measures approximately 20 feet by 18 feet. H<sub>2</sub>S readings at the well head ranged from 5 to 70 ppm. There were no readings of H<sub>2</sub>S observed in the breathing zone throughout the main building. Areas of this building are structurally damaged and one area of the building contains a large hole in the roof. There was evidence of a liquid waste material draining into a floor drain in Building 2 and leaking through cracks of the Building 2 foundation and onto surface concrete.

Building 3 is a large building located directly north of Building 2. In this building, a dark brown liquid was observed draining into a floor drain of a truck well and an area, measuring approximately 10 feet by 15 feet, where standing oil is located near two pieces of heavy machinery.

The following samples were collected during the site assessment:

- PSS-WL01-032910 – water leaking from the plugged well pipe in Building 2 where elevated levels of H<sub>2</sub>S were observed.
- PSS-WL02-032910 – water from a pool of standing water in Building 2 presumably from the leaking well pipe.
- PSS-WL03-032910 – liquid sample from a polyethylene (poly) 55-gallon drum in Building 1.
- PSS-WL04-032910 – liquid sample from a steel 55-gallon drum in Building 1.
- PSS-WL05-032910 – liquid sample from a poly 55-gallon drum in Building 2.
- PSS-WS02-032910 – potential asbestos containing building material from insulation wrapped around a boiler located outside Building 2.
- PSS-WL06-051010 – liquid sample from a truck well in Building 3.
- PSS-WL07-051010 – liquid sample from an exterior AST.
- PSS-WL08-051010 – liquid sample from a poly 5-gallon container in Building 2.
- PSS-WL09-051010 – liquid sample from a poly 5-gallon container in Building 2.
- PSS-WL10-051010 – liquid sample from a glass container in Building 1.
- PSS-WL11-051010 – liquid sample from a glass container in Building 1.
- PSS-WS03-051010 – solid sample from a 50-pound bag in Building 2.
- PSS-WS04-051010 – solid sample from an exterior AST.

The analytical results for the samples are discussed below. Analytical results were compared to either Resource Conservation and Recovery Act limits for determining characteristic hazardous waste or Michigan Department of Natural Resources and the Environment Part 201 Industrial and Commercial I Direct Contact Criteria (waste solid sample only). According to Title 40 of the *Code of Federal Regulations* (CFR), Part 261.2, a solid

waste is considered a hazardous waste if it exhibits any of the characteristics of ignitability, corrosivity (pH), toxicity, or reactivity.

- Samples PSS-WL01-032910 and PSS-WL02-032910 showed total sulfide results of 140 milligrams/liter (mg/L) and 4.9 mg/L, respectively. The total sulfides in the water samples presumably are the source of the H<sub>2</sub>S gas readings detected at the standing well pipe inside Building 2.
- Samples PSS-WL08-051010, PSS-WL10-051010, and PSS-WL11-051010 exhibit the characteristic of ignitability (i.e., ignitable under 140°F) given that each has a flashpoint of 65°F, 60°F, and 65°F, respectively.
- Samples PSS-WL09-051010 and PSS-WS03-051010 exhibit the characteristic of pH  $\leq 2$  or  $\geq 12.5$  standard units (SU) given that each has a pH of 1.9 and 13 SU, respectively.

### **III. THREATS TO PUBLIC HEALTH, WELFARE, OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES**

The conditions at the Site present a release or a threat of release of CERCLA hazardous substances, and meet the criteria for a time-critical removal action provided for in the National Contingency Plan (NCP), 40 CFR § 300.415 (b)(2). These criteria include the following:

- **Actual or potential exposure of nearby human populations, animals, or the food chain to hazardous substances or pollutants or contaminants**

Levels of H<sub>2</sub>S at a distance of one to two inches from the opening of the standing pipe in Building 2 the levels of reached a level of 70 ppm. The analytical results for the liquid samples collected from the standing pipe and the pool of standing water indicated total sulfides in the water of 140 mg/L and 4.9 mg/L, respectively. Given that the analytical results for both samples contained detectable levels of total sulfides, the water originating from the standing pipe and the pool of standing water could potentially expose nearby populations or trespassers to hazardous levels of H<sub>2</sub>S gas.

Site access is unrestricted due to a lack of secured fencing. A residential neighborhood is located immediately south of the Site, and evidence of trespassing was documented.

The presence of potentially hazardous and other unknown wastes poses a threat to nearby residents and trespassers due to the potential for off-site migration of contaminants and through direct contact exposure as well.

- **Actual or potential contamination of drinking water supplies or sensitive ecosystems**

The presence of drums and aboveground storage tanks with no secondary containment inside buildings and on the exterior grounds at the Site could affect sensitive ecosystems if the wastes were to migrate to nearby storm sewers or drain systems.

- **Hazardous substances or pollutants or contaminants in drums, totes, containers, or other bulk storage containers that may pose a threat of release**

Numerous containers of laboratory chemicals in a small room of Building 1 were observed, some of which were found to be flammable through laboratory analysis, as well as caustic and corrosive materials in Building 2. Unrestricted access to the Site could result in trespassers causing accidental or intentional releases of the chemicals stored within these containers, and/or chemical reactions that could result in the release of toxic gases. The close proximity of the Site to residences greatly increases potential threats to human health and environment if a release occurs.

- **Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released**

Weather conditions will continue to contribute to the deterioration of tanks, drums and containers on the exterior grounds of the Site, as well as to the deterioration of drums and containers located in the Site buildings, given the structurally unsound nature of some of the Site buildings. There may be friable asbestos-containing building materials within the Site buildings that may continue to deteriorate due to weather conditions.

#### **IV. ENDANGERMENT DETERMINATION**

Given the Site conditions, the nature of the suspected hazardous substances on-site, and the potential exposure pathways described in Section II and III above, actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the response actions selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, welfare, or the environment.

#### **V. PROPOSED ACTIONS & ESTIMATED COSTS**

##### **A. Proposed Action Description**

The OSC proposes that the following emergency removal actions be taken to mitigate threats posed by the presence of hazardous substances at the Site:

1. Develop and implement a Site safety and health plan and a Site security plan.
2. Secure the Site grounds from unauthorized access.

3. Secure, sample characterize, package and dispose off all hazardous materials and wastes in various containers, tanks , bags and on the floors in accordance with federal and state regulations and EPA's off-site rule 40 CFR 300.440.
4. Evaluate all tanks and structures for potential asbestos containing materials and if found, contain remove and dispose off all asbestos containing materials.
5. Remove and dispose off all contaminated media.
6. Properly cap the sulfur well on Site.
7. Conduct extent of contamination sampling and confirmatory sampling to establish the completion of removal action.

The removal action will be conducted in a manner not inconsistent with the National Contingency Plan (NCP). The OSC has initiated planning for provisions of post-removal Site control consistent with the provisions of Section 300.415(1) of the NCP. Elimination of all surface threats is, however, expected to minimize the need for post removal Site control.

The response actions described in this memorandum directly address actual or threatened releases of hazardous substances, pollutants, or contaminants at the Site which may pose an imminent and substantial endangerment to public health and safety and the environment. These response actions do not impose a burden on the affected property disproportionate to the extent to which that property contributes to the conditions being addressed. Removal activities will require 30 on-site working days to complete.

## **B. Estimated Costs**

The detailed cleanup contractor cost is presented in Attachment 1 and the estimated costs for this removal action are as follows:

### **Extramural Costs:**

Regional Removal Allowance Costs:	
Total Cleanup Contractor Costs (this cost category includes estimates for ERRS contractor and subcontractors)	\$193,000.00
Total START costs, including multiplier	\$42,000.00
Subtotal, Extramural Costs	\$235,000.00
Extramural Contingency (20% of Subtotal)	\$ 47,000.00
<b>TOTAL PROJECT CEILING</b>	<b>\$282,000.00</b>

### **C. Applicable or Relevant and Appropriate Requirements**

All applicable, relevant, and appropriate requirements (ARARs) will be complied with to the extent practicable considering the exigencies of the situation. On October 14, 2010 a letter was sent to Paul Owens of the Michigan Department of Natural Resources and Environment, Southeast Michigan District Office requesting that the State identify state ARARs.

All hazardous substances, pollutants or contaminants removed off-site pursuant to this removal action for treatment, storage and disposal shall be treated, stored, or disposed at a facility in compliance, as determined by U. S. EPA, with the U. S. EPA Off-Site Rule, 40 CFR 300.440.

### **VI. EXPECTED CHANGE IN THE SITUATIONS SHOULD ACTION BE DELAYED OR NOT TAKEN**

Given the Site conditions, the nature of the hazardous substances documented on-site, and the potential exposure pathways to nearby populations described in Sections II and III above, actual or threatened release of hazardous substances from the Site, if not addressed by implementing the response actions selected in this Action Memorandum, would present an imminent and substantial endangerment to public health, welfare, or the environment.

### **VII. OUTSTANDING POLICY ISSUES**

None

### **VIII. ENFORCEMENT**

For administrative purposes, information concerning the enforcement strategy for this Site is contained in the Enforcement Confidential Addendum.

The total EPA costs for this removal action based on full-cost accounting practices that will be eligible for cost recovery are estimated to be \$ 499,673.

$$(\$282,000 + \$25,000) + (62.76\% \times \$307,000) = \$ 499,673^1$$

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<sup>1</sup>Direct Costs include direct extramural costs and direct intramural costs. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site-specific direct costs, consistent with the full cost accounting methodology effective October 2, 2000. These estimates do not include pre-judgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal action. The estimates are for illustrative purposes only and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor deviation of actual total costs from this estimate will affect the United States' right to cost recovery.

## **IX. RECOMMENDATION**

This decision document represents the selected removal action for the Patterson Chemicals Inc. Site in Detroit, Michigan, developed in accordance with CERCLA as amended, and not inconsistent with the NCP. This decision is based on the administrative record for the Site (see Attachment 2). Conditions at the Site meet the NCP section 300.415 (b) (2) criteria for a time critical removal, and I recommend your approval of the removal action. The total removal action project ceiling if approved will be \$282,000. Of this, an estimated \$240,000 may be used for cleanup contractor costs. You may indicate your decision by signing below.

APPROVE: Paul Ke  
Director, Superfund Division

DATE: 12-17-10

DISAPPROVE: \_\_\_\_\_  
Director, Superfund Division

DATE: \_\_\_\_\_

Enforcement addendum

Attachments:

- 1) Detailed Cleanup Contractor Costs
- 2) Administrative Record Index
- 3) Independent Government Cost Estimate
- 4) Region 5 E.J. Analysis

cc: D. Chung, EPA, 5203-G

M. Chezick, U.S. DOI, W/O Enforcement Addendum

R. Humphries, MDNRE, W/O Enforcement Addendum

M. Cox, Michigan Attorney General W/O Enforcement addendum



**ENFORCEMENT CONFIDENTIAL ADDENDUM**

**PATTERSON CHEMICALS SITE  
DETROIT, WAYNE COUNTY, MICHIGAN**

**NOVEMBER 2010**

**(REDACTED 1 PAGE)**

**ENFORCEMENT CONFIDENTIAL  
NOT SUBJECT TO DISCOVERY**

## **ATTACHMENT 1**

### **DETAILED CLEANUP CONTRACTOR COST ESTIMATE**

**Patterson Chemical Inc. Removal Site  
Detroit, Wayne County, Michigan  
NOVEMBER 2010**

Estimated Cleanup Contractor costs are as follows:

Personnel	\$ 56,760
Equipment	\$ 26,500
Subcontractors (Including disposal)	\$ 68,000
Materials	\$16,500
15 % contingency	\$ 25,164
<b>TOTAL</b>	<b>\$192,924 (say \$193,000)</b>

## **ATTACHMENT 2**

### **Administrative Record Index Patterson Chemical Inc. Site Detroit, Wayne County, Michigan November 2010**

<b>Date</b>	<b>Author</b>	<b>Recipient</b>	<b>Title/ Description</b>	<b>pages</b>
3-26-2010	NRC Report	EPA Region 5	Spill report	3
6-24-2010	WESTON START	P.C. Lall EPA Region 5	Site Assessment Report	18
11- -2010	P.C. Lall U.S EPA	R. Karl U.S. EPA	Action Memo Pending	17

**ENFORCEMENT CONFIDENTIAL ADDENDUM**

**PATTERSON CHEMICALS SITE  
DETROIT, WAYNE COUNTY, MICHIGAN**

**NOVEMBER 2010**

**(REDACTED 1 PAGE)**

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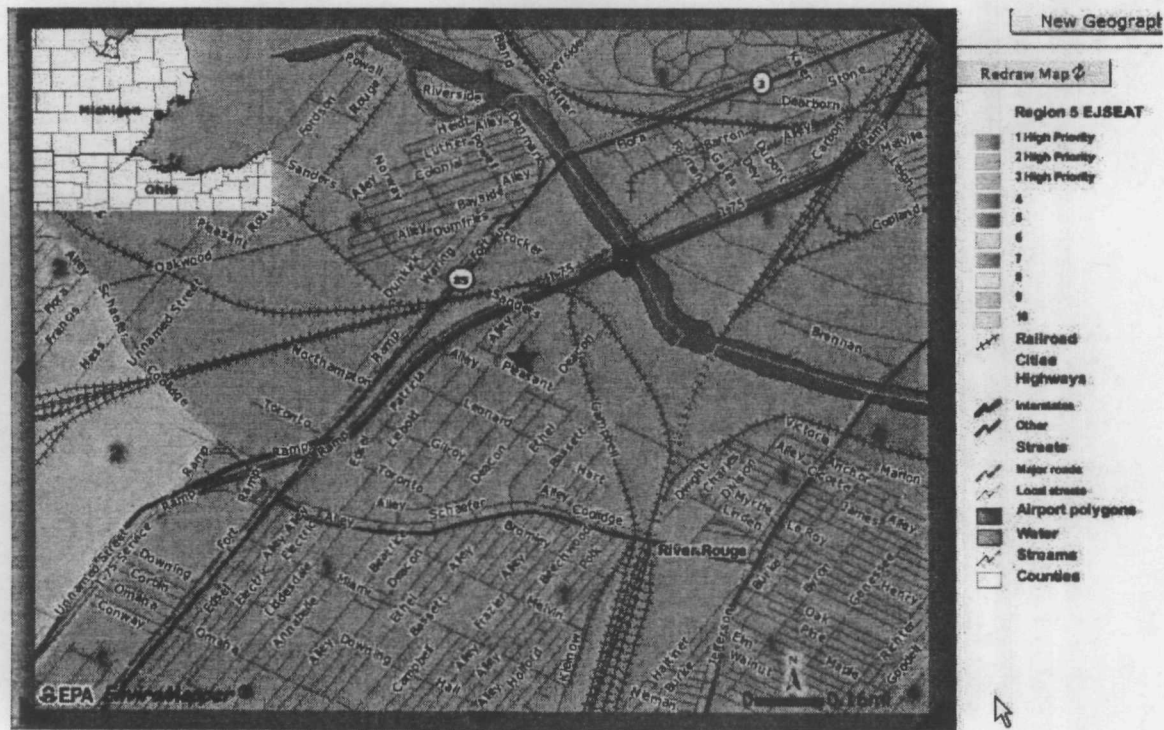
## ATTACHMENT 4

### R5 Superfund EJ Analysis for the Patterson Chemical Site

The area surrounding the Patterson Chemical Site was screened for Environmental Justice (EJ) concerns using Region 5's EJ Assist Tool (which applies the interim version of the national EJ Strategic Enforcement Assessment Tool (EJSEAT)). Census tracts with a score of 1, 2, or 3 are considered to be high-priority potential EJ areas of concern according to EPA Region 5. The Patterson Chemical Site is in a census tract with a score of 1 (Figure 1). Therefore, Region 5 considers this Site to be a high-priority potential EJ area of concern.

**Figure 1**

Patterson Chemical Site Map Showing EJ SEAT Values For Surrounding Area



# ATTACHMENT 3

INDEPENDENT GOVERNMENT COST ESTIMATE

PATTERSON CHEMICALS SITE  
DETROIT, WAYNE COUNTY, MICHIGAN

NOVEMBER 2010

NOT RELEVANT TO THE SELECTION OF THE REMOVAL ACTION

(REDACTED 4 PAGES)